Amendments to the Specification:

Please replace the paragraph beginning on page 3, line 20, with the following:

Figure 2 shows results of an experiment with an exemplary ligand sensor device (LSD). The graph shows typical LSD signal output. In the example shown, the LSD was prepared using the exemplary peptide of interest having the amino acid sequence ASSLNIA (SEQ ID NO:1). The reference or baseline signal output measurement was made after exposure of the LSD to phosphate buffered saline (PBS) with no homogenate. The ligand sensor device was exposed to murine muscle homogenate at various levels of dilution, including undiluted (3.8 mg/ml of protein), 1:5, 1:25, 1:125, and 1:625. Each line in the graph represents approximately 480 data points taken once a second during 8 minutes of quantifying the signal output from the ligand sensor device.

Please replace the paragraph beginning on page 21, line 21, with the following:

In this working example, a peptide selected *in vivo* for murine myofibers using a 7-mer phage display peptide library and having the sequence ASSLNIA (SEQ ID NO:1) was immobilized onto the surface of an acoustic wave sensor by biotin-streptavidin coupling. The sensor was exposed to samples of tissue homogenates, and binding of ligands was recorded. The sensor showed a strong response to murine muscle homogenates. The interaction was specific since preincubation of the muscle homogenates with free peptide resulted in significantly reduced signal. Feline muscle homogenates caused appreciable, but lower responses compared to those from murine muscle, indicating that the peptide was able to bind its putative receptor across species boundaries. In contrast, murine kidney, liver, and brain preparations produced insignificant responses, thus demonstrating the capability of the LSD of the invention to determine the potential relevance of a ligand for a variety of species.

Please replace the paragraph beginning on page 22, line 28, with the following:

A 7-mer phage display peptide library (New England Biolabs, Inc., Beverly, MA, USA) was screened as described in Samoylova and Smith (1999) *Muscle & Nerve* 22: 460-466. A peptide of interest specific to murine skeletal muscle was identified. This peptide was found to bind myofibers of murine skeletal muscles. The sequence of this peptide was determined by

conventional techniques to be: ASSLNIA (SEQ ID NO:1). The peptide was synthesized in combination with a spacer (GGGSK; SEQ ID NO:2) added to the C terminus and modified by coupling to biotin, and the biotinylated peptide was then HPLC purified to 98% by Peptide Technologies Corporation (Gaithersburg, MD, USA) and used to prepare a ligand sensor device.

Please replace the paragraph beginning on page 24, line 5, with the following:

Coupling the peptide of interest to the sensor. The sensor, prepared as described above by the addition of a Langmuir-Blodgett film of biotinylated lipid, was then coupled to the peptide of interest by molecular assembly with streptavidin. Streptavidin was diluted to a final concentration of 0.01 mg/ml in the subphase solution and exposed to the LB film for 2 hours; the film was then rinsed with distilled water and dried for 2 min in ambient air. The LB film was then treated with a solution of the biotinylated peptide of interest (ASSLNIAGGGSK (SEQ ID NO:3)-Biotin at 0.001 mg/ml in subphase solution) for 2 hours, rinsed and dried again as above. If necessary, this preparation step could be followed by a blocking step with a biotin solution. In this manner, the peptide of interest was coupled with the phospholipid via molecular assembly with streptavidin (see Figure 1), thereby coupling the peptide of interest to the sensor to create the ligand sensor device (LSD). Each LSD was placed in an individual Petri dish and stored no longer than 24 hours at 4°C until affinity assays were performed.